

This listing of claims will replace all prior versions, and listings, of the claims in the application:

**Listing of Claims:**

Claim 1. (Original) An assay for determining the cyclooxygenase- 2 activity of a sample comprising the steps of:

(a) adding

- (1) a human osteosarcoma cell preparation,
- (2) a sample, said sample comprising a putative cyclooxygenase-2 inhibitor, and
- (3) arachidonic acid; and

(b) determining the amount of prostaglandin E<sub>2</sub> produced in step (a).

Claim 2. (Original) An assay for determining the cyclooxygenase-2 activity of a sample according to claim 1 comprising the steps of:

(a) adding

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- (1) a human osteosarcoma cell preparation,
  - (2) a sample, said sample comprising a putative cyclooxygenase-2 inhibitor, and
  - (3) arachidonic acid; and

(b) determining the amount of prostaglandin E<sub>2</sub> produced in step (a),

wherein the cell preparation comprises  $10^3$  to  $10^9$  whole cells of osteosarcoma per cc, or 50 to 500 ug of osteosarcoma microsomes per ml of preparation; and 0.1 to 50  $\mu$ l of arachidonic acid per ml of preparation.

Claim 3. (Original) An assay for determining the cyclooxygenase-2 activity of a sample comprising the steps of:

(a) adding

- (1) a human osteosarcoma cell preparation,
- (2) a sample, said sample comprising a putative cyclooxygenase-2 inhibitor, and
- (3) arachidonic acid; and

(b) determining the amount of prostaglandin E<sub>2</sub> produced in step (a)

(c) correlating the amount of prostaglandin E<sub>2</sub> produced with cyclooxygenase-2 activity,

wherein the osteosarcoma cell preparation consists essentially of osteosarcoma 143.98.2 microsomes.

Claim 4. (Original) An assay according to claim 3 wherein the osteosarcoma 143.98.2 microsomes are substantially free of endogenous arachidonic acid.

Claim 5. (Original) An assay according to claim 3 wherein the microsomes are contacted with an amount of delipidized serum protein effective to reduce the amount of endogenous arachidonic acid in the microsomes by a factor of at least approximately 2.

Claim 6. (Original) An assay for determining the cyclooxygenase-2 activity of a sample comprising the steps of:

(a) adding

- (1) a human osteosarcoma cell preparation,
- (2) a sample, said sample comprising a putative cyclooxygenase-2 inhibitor, and
- (3) arachidonic acid; and

(b) determining the amount of prostaglandin E<sub>2</sub> produced in step (a),

(c) correlating the amount of prostaglandin E<sub>2</sub> produced with cyclooxygenase-2 activity,

wherein the human osteosarcoma cell preparation contains no recombinant vector.

Claim 7. (Original) An assay for determining the cyclooxygenase-2 activity of a sample comprising the steps of:

(a) adding

(1) a human osteosarcoma cell preparation,

(2) a sample, said sample comprising a putative cyclooxygenase-2 inhibitor, and

(3) arachidonic acid; and

(b) determining the amount of prostaglandin E<sub>2</sub> produced in step (a)

(c) correlating the amount of prostaglandin E<sub>2</sub> produced with cyclooxygenase-2 activity,

wherein the osteosarcoma cell preparation consists essentially of whole cells of osteosarcoma 143.98.2.

Claim 8. (Original) A composition comprising:

(a) an osteosarcoma cell preparation, having  $10^3$  to  $10^9$  osteosarcoma cells per cc of cell preparation or 50 to 500 µg of osteosarcoma microsomes; and

(b) 0.1 to 50 µl of arachidonic acid per cc of cell preparation.

Claim 9. (Original) A composition according to claim 8 comprising  $8 \times 10^4$  to  $2 \times 10^6$  osteosarcoma 143.98.2 whole cells per cc of cell preparation or 100 to 400 µg of osteosarcoma 143.98.2 microsomes; and 10 to 20 µl of peroxide-free arachidonic acid per cc of cell preparation.

Claim 10. (Original) A composition according to claim 9 wherein the microsomes are substantially free of endogenous arachidonic acid.

Claim 11. (Original) An assay for determining the cyclooxygenase-1 activity of a sample comprising the steps of:

(a) adding

(1) a COX-1 cell preparation,

(2) a sample, said sample comprising a putative cyclooxygenase-1 inhibitor;

(3) arachidonic acid; and

(b) determining the amount of prostaglandin E<sub>2</sub> produced in step (a)

(c) correlating the amount of prostaglandin E<sub>2</sub> produced with cyclooxygenase-2 activity.

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Claim 12. (Original) An assay according to claim 11 wherein the COX-1 cell preparation consists essentially of whole cells of U-937.

Claim 13. (Original) An assay according to claim 11 wherein the COX-1 cell preparation consists essentially of U-937 microsomes.

Claim 14. (Original) An assay for determining the cyclooxygenase-1 activity of a sample according to claim 10 comprising the steps of:

(a) adding

(1) a COX-1 cell preparation,

(2) a sample, said sample comprising a putative cyclooxygenase-1 inhibitor;

(3) arachidonic acid; and

(b) determining the amount of prostaglandin E<sub>2</sub> produced in step (a),

wherein the cell preparation comprises  $10^5$  to  $10^8$  whole cells of U-937 per cc, or 1 to 10 mg of U-937 microsomes per ml of preparation; and  
0.1 to 50  $\mu$ l of arachidonic acid per ml of preparation.

Claim 15. (Original) An assay according to claim 14 wherein the cell preparation comprises  $8 \times 10^8$  to  $1.5 \times 10^6$  whole cells of U-937 per cc, or 1 to 5 mg of U-937 microsomes per ml of preparation.

Claims 16 to 18 (Canceled)

Claim 19. (Once Amended) A transformed host that expresses cyclooxygenase-2 as shown in FIG. 1 (SEQ. ID. NO: 10) comprising:

- (a) a mammalian or eukaryotic expression vector; and
- (b) a sequence encoding human cyclooxygenase-2 comprising bases 97 to 1909 as shown in FIG. 2 (SEQ. ID. NO: 11) or encodes protein of FIG. 1 (SEQ. ID. NO: 10).

Claims 20 to 21 (Canceled).

Claim 22. (Once amended) Human cyclooxygenase-2 cDNA comprising the coding region which is bases 97 to 1909 of Fig. 2 (SEQ. ID. NO: 11).

Claim 23. (Once amended) Recombinant human cyclooxygenase-2 which is shown in Fig. 1 (SEQ. ID. NO: 10).

Claim 24. (Once amended) An isolated human cyclooxygenase-2 which is shown in Fig. 1 (SEQ. ID. NO: 10).

Claim 25. (Once amended) Purified human cyclooxygenase-2 which is shown in Fig. 1 (SEQ. ID. NO: 10).

Claim 26. (Previously presented) The transformed host according to claim 19 wherein

the expression vector is a vaccinia or baculovirus vector.

Claim 27. (Once amended) The transformed host according to claim 19 wherein the cyclooxygenase-2 is expressed in COS-7 cells.

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